S A F E T Y D A T A S H E E T

Ciprofloxacin Hydrochloride

CAS: 86393-32-0 | Catalog: ASA-2048 | Prepared in accordance with GHS/SDS requirements
Issue Date: 2025 | Revision: 1.0 | Supersedes: All previous versions

SECTION 1 — IDENTIFICATION

Product Name	Ciprofloxacin Hydrochloride
Catalog Number	ASA-2048
CAS Number	86393-32-0
Chemical Class	Fluoroquinolone antibiotic
Intended Use	Research use only — in vitro and in vivo laboratory applications
Supplier	AuSaMicS Pty Ltd
Address	31 Longview CT, Thomastown, VIC 3074, Australia
ABN	ABN: 56 676 640 467
Phone	+61 412 520 598
Email	support@ausamics.com
Website	www.ausamics.com.au
Emergency Contact	Poisons Information Centre (Australia): 13 11 26

SECTION 2 — HAZARD IDENTIFICATION

GHS Classification: Acute Toxicity — Oral Category 4 (H302: Harmful if swallowed). Serious Eye Damage Category 1 (H318: Causes serious eye damage). Specific Target Organ Toxicity — Repeated Exposure Category 2 (H373: May cause damage to organs through prolonged or repeated exposure). Reproductive Toxicity Category 2 (H361: Suspected of damaging fertility or the unborn child).

Signal Word: WARNING

Hazard Statements:

- H302 — Harmful if swallowed
- H318 — Causes serious eye damage
- H373 — May cause damage to organs through prolonged or repeated exposure
- H361 — Suspected of damaging fertility or the unborn child

Precautionary Statements:

- P201 — Obtain special instructions before use
- P260 — Avoid breathing dust

- P264 — Wash hands thoroughly after handling
- P270 — Do not eat, drink, or smoke when using this product
- P280 — Wear protective gloves, eye and face protection
- P301+P312 — IF SWALLOWED: Call Poisons Information Centre (13 11 26) if unwell
- P305+P351+P338 — IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses — seek immediate medical attention
- P308+P313 — IF exposed or concerned: Seek medical advice
- P501 — Dispose of contents in accordance with local regulations

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Content	GHS Classification
Ciprofloxacin hydrochloride	86393-32-0	**≥ 99%**	H302, H318, H361, H373

SECTION 4 — FIRST AID MEASURES

Route	First Aid Action
Eye Contact	Rinse immediately with water for at least 15 minutes. Causes serious eye damage — seek immediate medical attention.
Skin Contact	Wash thoroughly with soap and water for at least 10 minutes. Remove contaminated clothing.
Inhalation	Move to fresh air immediately. If breathing difficulties develop, seek medical attention.
Ingestion	Do NOT induce vomiting. Rinse mouth with water. Call Poisons Information Centre (13 11 26) immediately. Harmful if swallowed.

SECTION 5 — FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Water spray, foam, dry powder, CO_2
- Not classified as flammable
- Combustion may produce toxic fumes including HF, HCl, NOx, and CO
- Fire-fighters: use self-contained breathing apparatus and full protective equipment

SECTION 6 — ACCIDENTAL RELEASE MEASURES

- Wear full PPE — gloves, eye protection, dust mask
- Avoid generating dust — antibiotic compounds require careful containment
- Sweep or vacuum carefully; collect in labelled sealed containers
- Do not discharge to drains or waterways — antimicrobial activity may affect aquatic microbiota
- Dispose of in accordance with local regulations for pharmaceutical/research compounds

SECTION 7 — HANDLING AND STORAGE

Aspect	Guidelines
Handling	Use in a well-ventilated laboratory. Avoid generating dust. Do not eat/drink/smoke. Wash hands thoroughly after handling. Suspected reproductive toxin — women of childbearing potential should use additional precautions.
Storage	Refrigerator (2–8°C) — away from moisture and heat, tightly sealed.
Incompatibilities	Strong oxidising agents; strong acids and bases; metal ions (forms chelates with Ca^{2+}, Mg^{2+}, Al^{3+}, Fe^{3+}).

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

PPE	Specification
Respiratory	P2/P3 dust mask — avoid inhalation of powder. Use fume hood for large quantities.
Hands	Nitrile gloves (double-glove recommended for extended handling)
Eyes	Safety goggles — causes serious eye damage
Body	Laboratory coat; closed-toe footwear. Suspected reproductive toxin — use appropriate precautions.
OEL	No specific OEL established — minimise exposure; apply good laboratory practice.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical Form	Solid (crystalline powder)
Colour	White to slightly yellow
Odour	Odourless or faint characteristic
Molecular Formula	$C_{16}H_{15}FN_3O_3 \cdot HCl$
Molecular Weight	367.81 g/mol
Solubility	Soluble in water and dilute acid; slightly soluble in ethanol
Purity	≥ 99% (HPLC)
Flammability	Not classified as flammable
Light Sensitivity	Protect from direct light

SECTION 10 — STABILITY AND REACTIVITY

- Stable under recommended refrigerated storage conditions
- Conditions to avoid: Direct light, high temperatures, moisture, strong acids/bases
- Incompatible: Strong oxidising agents, polyvalent metal ions (Ca^{2+}, Mg^{2+}, Al^{3+}, Fe^{3+} — chelation reduces bioavailability)
- Hazardous decomposition: HF, HCl, NOx, CO upon combustion
- Hazardous polymerisation: Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	H302 — Harmful if swallowed (GHS Cat. 4)
Eye Damage	H318 — Causes serious eye damage (GHS Cat. 1)
Reproductive Toxicity	H361 — Suspected of damaging fertility or the unborn child (GHS Cat. 2)
Organ Toxicity (Repeat)	H373 — May cause organ damage through prolonged/repeated exposure (GHS Cat. 2)
Carcinogenicity	Not classified as carcinogenic
Sensitisation	Not classified as a dermal or respiratory sensitiser
Mutagenicity	Not classified
Antibiotic Nature	Active antibiotic — do not discharge to environment; may cause antimicrobial resistance propagation

SECTION 12 — ECOLOGICAL INFORMATION

ENVIRONMENTAL WARNING: Ciprofloxacin is an active broad-spectrum antibiotic. Discharge to waterways, drains, or soil may cause ecological harm by selecting for antimicrobial resistance in environmental microbiota. All waste must be treated as pharmaceutical/chemical waste.

- Aquatic toxicity: Harmful to aquatic organisms — antimicrobial activity persists in the environment
- Biodegradation: Resistant to rapid biodegradation — persistent in aquatic environments
- Bioaccumulation: Low potential — however, sub-inhibitory concentrations may drive resistance selection
- Soil: Adsorbs strongly to soil particles — may affect soil microbiome

SECTION 13 — DISPOSAL CONSIDERATIONS

- Treat as pharmaceutical/bioactive chemical waste — do NOT dispose of in general waste
- Inactivate prior to disposal: autoclave or chemical inactivation (NaOH treatment) where applicable
- Contact a licensed pharmaceutical waste disposal company
- Comply with applicable state/territory and national environmental legislation

SECTION 14 — TRANSPORT INFORMATION

UN Number	Not classified as dangerous goods under standard transport quantities (ADG / IATA / IMDG)
Packing Group	Not applicable
Special Notes	Refrigerated transport recommended. Keep dry. Handle with care.

SECTION 15 — REGULATORY INFORMATION

Research use only — not for human or veterinary therapeutic use. Classified as a Schedule 4 (Prescription Only) medicine in Australia when used therapeutically — this product is supplied exclusively for research purposes. Comply with applicable Safe Work Australia requirements for hazardous substances. Supplier: AuSaMicS Pty Ltd | 31 Longview CT, Thomastown, VIC 3074, Australia | ABN: 56 676 640 467 | +61 412 520 598 | support@ausamics.com

SECTION 16 — OTHER INFORMATION

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